CLEANING ROD FOR WOODWIND MUSICAL INSTRUMENTS

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3 Claims

ABSTRACT OF THE DISCLOSURE

A cleaning rod for woodwind musical instruments is further combined with adjusting tools such as a screwdriver, a needle spring setter, a small knife, etc., whereby a versatile cleaning and adjusting tool is obtained.

This invention relates to a cleaning rod for woodwind musical instruments such as clarinets, saxophones, and the like wherein adjusting tools including repairing tools, for instance, a screwdriver a needle spring setter, a small knife, etc. are combined together.

Hereinafter, saliva or any liquid accumulated inside of a woodwind instrument was removed from the inner bore of the instrument with a cleaning rod. The rod made of synthetic resin or metal is provided with a hole at one end so that a piece of cloth or the like is passed therethrough.

As is well known, the woodwind musical instruments have a number of tone holes arranged along its length, and each of the tone holes has a tone hole cover which is made operable (open or closed) through the utilization of a needle spring. The tone hole covers are so constructed that when one of the tone hole covers is pushed down, a specifically determined number of other tone hole covers are also pressed down to close the corresponding tone holes. When these tone hole covers are required to be adjusted so that they can correctly close the tone holes, a plurality of specifically provided adjusting screws should be employed.

For this reason, it is a common practice for the player of the woodwind musical instrument that these screw are adjusted for the purpose of adjusting the setting angle of the tone hole covers, and also that some of the needle springs are temporarily taken out for adjusting the tension of the springs, at the same time when the woodwind instruments are cleaned inside. Furthermore, if a clarinet or the like is used, the cork inserted at the junction portion of such an instrument has a tendency to be swelled out, and the swollen portion of the cork must be cut away by the use of a small knife.

In the past, a screwdriver, a needle spring setter, a small knife, etc., utilized for the above described adjusting and repair were separately provided besides said cleaning rod. However, when these tools were separately provided each time the woodwind instruments were cleaned and adjusted, it required too much trouble and was accompanied by a tendency that these tools were easily lost whenever they were required.

The primary object of the present invention is to overcome these drawbacks by means of a novel construction of the cleaning tool in which the repairing and adjusting tools such as a screwdriver, a needle spring setter, a small knife, etc., are combined into one unit. With this construction of a cleaning rod for woodwind musical instruments, it is possible to obtain a unique versatile tool which is convenient in use.

The present invention will now be described in more details in conjunction with the accompanying drawings, in which;

FIG. 1 illustrates a perspective view of an embodiment of the present invention wherein the cleaning tool and two of said adjusting tools are combined together;

FIG. 2 is a perspective and partially sectional view of the same embodiment in which the connection between a cleaning rod and a screwdriver is shown; and

FIG. 3 is a perspective and partially sectional view of the embodiment in which the connection between a screwdriver and a needle spring setter is shown.

Referring now to the cleaning rod assembly 1 of the present invention shown in FIGS. 1, 2 and 3, inclusive, there is illustrated a cleaning rod 2 made of synthetic resin or metal and at an end of which a hole 21 is provided as in the case of the conventional cleaning rod so that a piece of cloth can be passed through the hole.

At the other end of the cleaning rod 2, a tubular bore 22 is cut through and internal thread 23 is provided at the end of the tubular bore 22. A screwdriver 3 for adjusting the woodwind instrument is also provided with external threads 32 at the forward end of the handle 31, and when the front portion of the screwdriver 3 is inserted into the tubular bore 22 of the cleaning rod 2, the external thread 32 engages the internal threads 23 of the cleaning rod 2. The handle 31 of the screwdriver 3 also has a tubular bore 34 and internal threads 33 at the end. The internal thread 33 engages the external threads 42 provided at the forward end of a handle 43 of a needle spring setter 4 when the forward portion 41 of the needle spring setter 4 is inserted into the tubular bore 34 of the screwdriver 3.

At the forward end of the needle spring setter 4, a longitudinal notch 411 and a separate notch portion 412 are provided, and these notches are employed for the assembling or disassembling of the needle springs of the woodwind instruments.

With these constructions of the cleaning rod 2, the screwdriver 3, and the needle spring setter 4, all of these tools can be assembled into one unit, and because the handles 31 and 43 are provided, the cleaning operation by means of this assembly is facilitated. Whenever it is required to tighten or release the adjusting screws of the woodwind musical instruments, the screwdriver 3 is disassembled from the cleaning rod 2 as shown in FIG. 2, and whenever disassembling or assembling of the needle springs is desired, the needle spring setter 4 may be likewise disassembled from the rear end of the driver 3.

In other embodiments of the present invention (not shown), any one of the screwdriver or the needle spring setter may be replaced by a small knife, or all of the screwdriver, the needle spring setter, and the small knife may be assembled together in the same manner as described above.

As is apparent from the above description, as required adjusting tools are assembled with the cleaning rod, it is possible to eliminate much troubles of preparing these tools each time they are needed, and fear of losing these tools may be decreased.

What is claimed is:

1. A unitary cleaning rod assembly for woodwind musical instruments, comprising,
a first cleaning instrument on a first shaft; said first shaft having a handle to be grasped by the user of said first instrument; said first shaft also having a first threaded portion thereon for engaging a cooperating first threaded opening;
a second cleaning instrument on a second shaft; said second shaft having a first hollow bore, including a first threaded opening, which opening cooperates with said first threaded portion of said first shaft to hold said first and second shafts removably together; said first cleaning instrument extending into said first hollow bore; said second shaft also having a second threaded opening;
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portion thereon for engaging a cooperating second threaded opening;
a third cleaning instrument on a third shaft; said third shaft having a second hollow bore, including a second threaded opening, which opening cooperates with said second threaded portion of said second shaft to hold said second and third shafts removably together; said second cleaning instrument extending into said second hollow bore;
one of said first, second and third cleaning instruments
being a knife spring setter, another of them being a screwdriver and the last of them being a loop to receive a cleaning cloth.

2. The unitary cleaning rod assembly for woodwind instruments of claim 1, wherein said first instrument is said needle spring setter, said second instrument is said screwdriver and said third instrument is said loop for receiving a cloth.

3. The unitary cleaning rod assembly for woodwind instruments of claim 1, wherein a knife is substituted for one of said needle spring setter, said screwdriver and said loop.

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